

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

Yuki SASAKI et al.

Application No.: 10/731,031

Examiner: J. ROGERS

Filed: December 10, 2003

Docket No.: 118048

For: RESIN POWDER FOR COSMETIC AND COSMETIC USING THE SAME

BRIEF ON APPEAL

Appeal from Group 1618

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I. REAL PARTY IN INTEREST

The real party in interest for this appeal and the present application is Fuji Xerox Co., Ltd., by way of an Assignment recorded in the U.S. Patent and Trademark Office at Reel 014783, Frame 0758.

II. RELATED APPEALS AND INTERFERENCES

There are no prior or pending appeals, interferences or judicial proceedings, known to Appellant, Appellant's representative, or the Assignee, that may be related to, or that will directly affect or be directly affected by or have a bearing upon, the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-16 and 18-20 are on appeal.

Claims 1-16 and 18-20 are pending.

Claims 1-16 and 18-20 are rejected.

Claim 17 is canceled.

IV. STATUS OF AMENDMENTS

No Amendment After Final Rejection has been filed.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Resin powders are used within various cosmetic products such as, for example, eye shadows, baby powders, emulsions, antiperspirant powders and body shampoos. See page 1, lines 6-8 of the specification. Prior to the present application, cosmetic products employed plate-like organic silicone resin powders such as those described in JP 2000-302858 A to improve spreadability on application and affinity to skin. See page 1, line 19 to page 2, line 3 of the specification. However, the present inventors determined that organic silicon resin powders are not sufficiently compatible with the oil components of cosmetic resin powders, which resulted in the cosmetic being degraded with respect to (1) spreadability when applied to the skin and (2) the affinity or adhesion of the cosmetic after application to the skin. See page 2, lines 7-19 of the specification.

In contrast, the subject matter of the present application achieves resin particles (1) with a degree of hydrophobicity from 10% to 60% and (2) with an area, after having undergone a reshaping treatment, that satisfies the following equations: $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$, where a is a major axis of each particle, b is a minor axis of each particle and c is a thickness of each particle. See page 3, lines 5-17 of the specification. A resin powder with a hydrophobicity and area within the ranges recited above exhibited (1) improved spreadability when applied to the skin and (2) affinity of the cosmetic after being applied to the skin, and thus such a resin powder would be compatible with the oil components in various cosmetic resin powders. See page 4, line 24 to page 5, line 12.

The resin powder of claims 1, 15, 18, 19 and 20 achieves both of the above improvements. See page 2, lines 16-19 and page 7, lines 1-2 of the specification.

A. Independent Claims 1, 18, 19 and 20

Claim 1 is directed to a resin powder that is generally comprised of resin particles, wherein the resin particles (1) have a degree of hydrophobicity of from 10%

to 60% (page 3, line 6 and page 10, line 5 to page 11, line 3 of the specification), and (2) have undergone a reshaping treatment (page 26, lines 22-23 of the specification), and when seen from a direction in which a projected area of the particle to a plane is maximum, the particles satisfy the following equations: $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$ where a is a major axis of each particle; b is a minor axis of each particle; and c is a thickness of each particle (page 14, line 18 to page 15, line 7 and Figure 1 and Figure 2 of the specification).

If the degree of hydrophobicity is less than 10%, spreadability of the cosmetic and affinity of the cosmetic after application both are both insufficient. See page 10, lines 8-9 of the specification. If the degree of hydrophobicity is greater than 60%, the compatibility of the resin particles with the oil component of a resin powder causes the resin particles to coagulate and thus eliminates the affinity and texture of the cosmetic after application. See page 10, line 9 to page 11, line 3 of the specification. However, if the degree of hydrophobicity is within the range of 10% to 60%, both sufficient spreadability and affinity will result. See page 11, lines 10-11 of the specification.

The reshaping step can be carried out by (1) applying a heat and a mechanical shear force to a dispersion of resin particles or (2) applying a physical stress to a dispersion of resin particles to achieve the desired values for b/a and c/b . See page 28, lines 6-13 of the specification.

Moreover, the projected area of the resin particle can be maximized by satisfying the following equations: $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$ where a is a major axis of each particle, b is a minor axis of each particle; and c is a thickness of each particle. See page 6, lines 19-20 and page 13, line 11 to page 14, line 8 of the specification. If the b/a or c/b ratio falls outside of the ranges recited above, the smoothness of the resin particle decreases and furthermore, when combined with an oil component to form a cosmetic, the spreadability also decreases. See page 14, lines 18-22 of the specification. Thus, a resin particle with the b/a

and c/b ratio that falls within the ranges recited above will thus have improved spreadability. See page 14, line 22 to page 15, line 5 and Tables 3-7 of the specification.

B. Independent Claim 15

Claim 15 is directed to a process for preparing a resin powder comprised of resin particles, comprising (1) producing the particles by emulsion polymerization (see page 26, line 24 to page 27, line 4 of the specification), (2) subjecting the particles to a reshaping treatment (page 28, lines 4-13 of the specification) and (3) flattening the particles by colliding the particles against a uniform plane under high pressure (see page 30, lines 5-7 of the specification), wherein the resin particles (1) have a degree of hydrophobicity of from 10 % to 60 % (page 3, line 6 of the specification), and (2) have undergone a reshaping treatment (page 26, lines 22-23 of the specification), and when seen from a direction in which a projected area of the particle to a plane is maximum, the particles satisfy the following equations: $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$ where a is a major axis of each particle; b is a minor axis of each particle; and c is a thickness of each particle (page 14, line 18 to page 15, line 7 of the specification).

In other words, claim 15 is directed to a process of preparing the resin powder of claim 1 comprising (1) producing resin particles by emulsion polymerization, (2) subjecting the particles to a reshaping treatment and (3) flattening the particles by colliding the particles against a uniform plane under high pressure. See page 26, lines 19-23 and page 30, lines 5-7 of the specification.

Emulsion polymerization can be used to produce the resin particles. See page 26, line 24 to page 27, line 4 of the specification. First, a dispersion is prepared by emulsion polymerizing a monomer of the resin and dissolving the monomer in a solvent, and mixing with a first ionic surfactant. See page 27, lines 7-10 of the specification. The dispersion is then mixed with a second ionic surfactant having the opposite polarity of the first ionic

surfactant to heterogeneously coagulate the resin particles into the desired particle size. See page 27, lines 10-14 of the specification. The coagulated resin particles are then heated at or above the glass transition point of the resin and held for about 4-10 hours (ensphering time) to fuse and unify the resin particles into a matrix. See page 27, lines 15-23 of the specification.

The reshaping step can be carried out by (1) applying a heat and a mechanical shear force to a dispersion of resin particles to reshape the matrix particles to conform to the ratios of b/a and c/b as recited above. See page 28, lines 6-11 of the specification.

However, the reshaping step can also be carried out by applying a physical stress to the matrix particles by colliding the particles against a uniform plane under high pressure. See page 28, lines 12-14 and page 30, lines 5-7 of the specification. As the uniform plane is typically a wall of metal and the applied pressure is about 20 to 200 MPa, the desired smoothness and thus spreadability can be obtained. See page 30, lines 8-12 of the specification.

C. Independent Claim 18

Claim 18 is directed to a powdered cosmetic comprising an oil component (page 35, lines 18-20 and page 37, line 23 to page 38, line 16 of the specification) and a resin powder that is generally comprised of resin particles, wherein the resin particles (1) have a degree of hydrophobicity of from 10% to 60% (page 3, line 6 of the specification), and (2) have undergone a reshaping treatment (page 26, lines 22-23 of the specification), and when seen from a direction in which a projected area of the particle to a plane is maximum, the particles satisfy the following equations: $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$ where a is a major axis of each particle; b is a minor axis of each particle; and c is a thickness of each particle (page 14, line 18 to page 15, line 7 of the specification).

In other words, the powdered cosmetic of claim 18 is formulated using the resin powder recited in claim 1 and an oil component. See page 34, lines 16-17 of the specification.

D. Independent Claim 19

Claim 19 is directed to an emulsified cosmetic comprising an oil component (page 35, lines 18-20 and page 37, line 23 to page 38, line 16 of the specification) and a resin powder that is generally comprised of resin particles, wherein the resin particles (1) have a degree of hydrophobicity of from 10% to 60% (page 3, line 6 of the specification), and (2) have undergone a reshaping treatment (page 26, lines 22-23 of the specification), and when seen from a direction in which a projected area of the particle to a plane is maximum, the particles satisfy the following equations: $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$ where a is a major axis of each particle; b is a minor axis of each particle; and c is a thickness of each particle (page 14, line 18 to page 15, line 7).

In other words, the emulsified cosmetic of claim 19 is formulated using the resin powder recited in claim 1 and an oil component. See page 39, line 17 to page 40, line 7 of the specification.

E. Independent Claim 20

Claim 20 is directed to an antiperspirant cosmetic comprising an oil component (page 35, lines 18-20 and page 37, line 23 to page 38, line 16 of the specification) and a resin powder that is generally comprised of resin particles, wherein the resin particles (1) have a degree of hydrophobicity of from 10% to 60% (page 3, line 6 of the specification), and (2) have undergone a reshaping treatment (page 26, lines 22-23 of the specification), and when seen from a direction in which a projected area of the particle to a plane is maximum, the particles satisfy the following equations: $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$ where a is a major

axis of each particle; b is a minor axis of each particle; and c is a thickness of each particle (page 14, line 18 to page 15, line 7 of the specification).

In other words, the antiperspirant cosmetic of claim 20 is formulated using the resin powder recited in claim 1 and an oil component. See page 40, lines 8-21 of the specification.

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds of rejection are presented for review:

1) Claims 1-15 and 18-20 are rejected as anticipated under 35 U.S.C. §102(e) by U.S.

Publication No. 2003/0044370 (Sasaki '370);

2) Claims 1-15 and 18 are rejected as anticipated under 35 U.S.C. §102(e) by U.S.

Patent No. 6,893,649 (Sasaki '649); and

3) Claims 1-16 and 18-20 are rejected as unpatentable under 35 U.S.C. §103(a) over Sasaki '370 in view of U.S. Publication No. 2003/0023021 ("Sakuma").

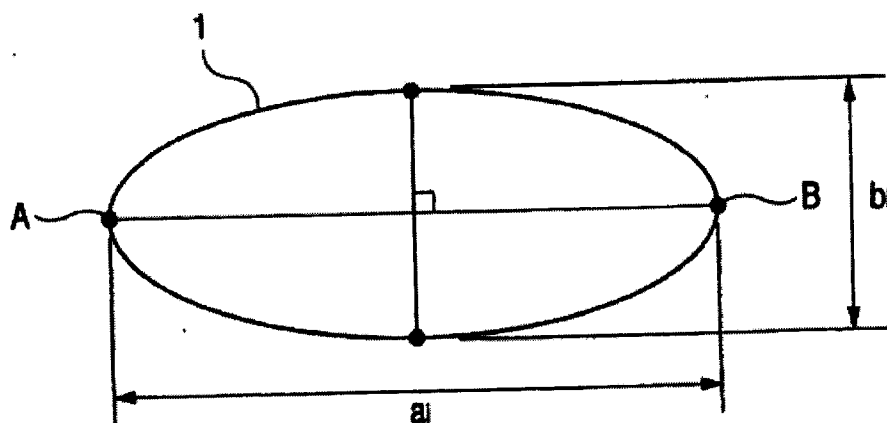
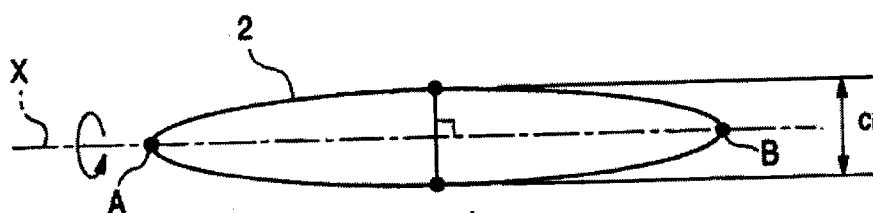
VII. ARGUMENT**A. Claims 1-15 and 18-20 Are Not Anticipated By Sasaki '370 and Claims 1-15 and 18 Are Not Anticipated By Sasaki '649**

Claims 1, 15 and 18-20 require a resin powder for cosmetic including particles containing a resin, wherein the particles have undergone a reshaping treatment, the particles satisfying the equations: $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$, where a is a major axis of each particle, b is a minor axis of each particle, and c is a thickness of each particle.

The Examiner alleges that Sasaki '370 and Sasaki '649 disclose particles with an SF1 of between 110 and 140 as in the present application (see dependent claim 2), and thus would allegedly inherently have dimensions that satisfy the recited equations, $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$ (see last paragraph of page 4 of the September 12, 2007, Office Action). This is factually in error for several reasons, including that (1) neither Sasaki '370 nor Sasaki '649 teach or suggest performing a reshaping treatment and (2) the evidence of record confirms that a, b and c are independent of SF1 values, i.e., a given SF1 value does not inherently result in the b/a and c/b ratios being met, as required in claims 1, 15 and 18-20.

1. The Allegation that a, b and c Is Dependent Upon SF1 Is Factually in Error

A resin particle's b/a and c/b ratios are not dependent on SF1 values as alleged by the Examiner. For example, Preparation Examples 1, 3 and 4 of the present application illustrate that SF1 values are independent of the dimensions b/a and c/b. SF1 values are determined by the following equation: $SF1 = (ML^2/A) \times (\pi/4) \times 100$, where ML is the maximum length of the resin particle and A is the projected area of the resin particle. See page 3, lines 7-12 of the specification. However, a, b and c are representative of a major axis, a minor axis, and a thickness, respectively, of each resin particle. See page 3, lines 14-17 and Figures 1 and 2 of the present specification, which are reproduced below.

**Figure 1****Figure 2**

Thus, the dimensions b/a and c/b cannot be specified or predicted by a given SF1 value and the dimensions b/a and c/b cannot be predicted to be achieved based on SF1 values, particularly based on SF1 values for particles that have not undergone reshaping. In fact, the Rule 1.132 Declaration filed December 15, 2006, ("first Declaration") and the Rule 1.132 Declaration filed July 5, 2007, ("second Declaration")* confirm that the particles of Sasaki '370 and Sasaki '649 that have SF1 values within the range of 110-140, have b/a values and c/b values outside the ranges recited in claims 1, 15 and 18-20 because the particles were not reshaped.

* A copy of the first Declaration and the second Declaration is included in Appendix B.

As such, the Examiner's allegation that the b/a and c/b values are inherent from the resin particles recited in Sasaki '370 and Sasaki '649 is factually incorrect because the SF1 is independent from the dimensions recited at b/a and c/b . Thus, these b/a and c/b values cannot be taught or suggested by either Sasaki '370 or Sasaki '649. Thus, Sasaki '370 and Sasaki '649 do not anticipate the present claims.

2. The Patent Office's Dismissal of Evidence in the First Declaration under 37 C.F.R. §1.132 as Allegedly Irrelevant to an Anticipation Rejection Is Factually in Error

The first Declaration under 37 C.F.R. §1.132, filed on December 15, 2006, clearly established that required dimensions b/a and c/b of the particles in claims 1, 15 and 18-20 are not inherent to particles formed in accordance with the teachings of Sasaki '370 and Sasaki '649. The Examiner erred by dismissing this evidence as allegedly irrelevant to an anticipation rejection, and as allegedly not being representative of Sasaki '370 and Sasaki '649.

However, the first Declaration provides evidence, as set forth in Table 1 of the first Declaration, that particles of resin powders formed in accordance with the teachings of Sasaki '370 and Sasaki '649 exhibit $b/a = 1$ and $c/b = 1$, which clearly fail to satisfy the recited equations, $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$, as specifically defined in claims 1, 15 and 18-20.

The first Declaration describes Comparative resin powders A and B that were prepared in accordance with Example 1 described in Sasaki '370 and Manufacture Example 1 described in Sasaki '649, respectively. The comparative resin powders A and B were prepared in the same manner as Preparation Example 1 described in the present application, except that a reshaping treatment was not conducted in preparing these comparative powders.

As shown in Table 1 of the first Declaration, the comparative resin powders A and B, of Sasaki '370 and Sasaki '649 respectively, do not satisfy the requirements that $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$.

Maintaining the rejection in the face of evidence that the particles of Sasaki '370 and Sasaki '649 do not inherently achieve the required b/a and c/b ratios based on the SF1 values is in error. Furthermore, without reshaping, which is not taught to be done in the Sasaki '370 or Sasaki '649, different b/a and c/b values would not have been expected. As such, the evidence presented in the first Declaration is representative of the teachings in Sasaki '370 and Sasaki '649, and shows that Sasaki '370 and Sasaki '649 do not anticipate the resin particles cited in claim 1.

**3. The Patent Office Must Provide Evidence
or Rationale Tending to Show Inherency**

The Patent Office erroneously asserts that the evidence presented in the first Declaration is insufficient in only showing one working example of Sasaki '370 with particles having a SF1 of 112 and one working example of Sasaki '649 with particles having a SF1 of 115. Applicants submit that this evidence is sufficient

As recited in MPEP § 2112 (IV), the Patent Office must provide rationale or extrinsic evidence tending to show inherency. Further, the "extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference and that it would be so recognized by person of ordinary skill." See *In re Robertson*, 169 F.3d 743, 745 (Fed Cir. 1999). However, "[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish inherency of that result or characteristic." See *In re Rijckaert*, 9 F.3d 1531, 1534 U.S.P.Q.2d 1955, 1957; MPEP §2112(IV) (emphasis added).

In *Ex Parte Levy*, 17 USPQ2d 1461, 1462 (Bd. Pat. App. & Inter. 1990), the Board held "the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Id.* at 1464 (emphasis in original).

The Examiner has not provided a factual basis or technical reasoning to reasonably support the Examiner's allegation that the b/a and c/b values of the present claims are always and necessarily satisfied such that these values might be conceived inherent from Sasaki '370 and Sasaki '649 and thus anticipate the present claims. The evidence in the first Declaration, in fact, confirms that the teachings of Sasaki '370 and Sasaki '649 do not always and necessarily achieve the recited values of b/a and c/b . As such, the anticipation rejections for Sasaki '370 and Sasaki '649 should be reversed.

4. The Patent Office's Dismissal of Evidence in the Second Declaration as Allegedly Being a Narrow Interpretation of the Sasaki References Taken from Only one Example of Each Reference Is Also Factually in Error

The second Declaration clearly established, as set forth in Table 1 of the second Declaration, that (1) particles of resin powders according to the teachings of Sasaki '370 exhibit b/a values of 1 (see first comparative examples 1 and 3-7 in Table 1) and c/b values of 1 (see comparative examples 1-7 in Table 1) and (2) particles according to Sasaki '649 exhibit b/a values of 0.8 (see second comparative examples 6 and 8 in Table 2), 0.9 (see second comparative example 5 in Table 2) or 1 (see second comparative examples 1-4 and 7 in Table 2) and c/b values of 0.9 (see second comparative examples 3, 6 and 7 in Table 2), 1 (see second comparative examples 1, 2, 4 and 8 in Table 2) or 1.1 (see second comparative example 5), which clearly fail to satisfy the b/a and c/b ratios of the present claims.

Tables 1 and 2 of the second Declaration also confirm that even though comparative examples 1-7 in Table 1 and second comparative examples 1-4 and 7 in Table 2 may have a shape factor SF1 value within a range of 110 to 140, the particles of comparative examples 1-7 and of second comparative examples 1-4 and 7 still fail to satisfy the required equations (i.e.,

$0.5 < b/a < 1$ and $0.4 < c/b < 0.8$) of claims 1, 15 and 18-20. As discussed above and evidenced in the Second Declaration, all particles in accordance with Sasaki '370 and Sasaki '649 do not have a b/a ratio between 0.5 and 1.0 and a c/b ratio between 0.4 and 0.8. This indicates that the values of a , b and c are not inherent to the particles of Sasaki '370 and Sasaki '649 as alleged by the Examiner.

Thus, the evidence in the Second Declaration further illustrates that the particles of the Sasaki references fail to satisfy the required equations (i.e., $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$) in claims 1, 15 and 18-20, again at least because the particles are not reshaped to have dimensions that satisfy those required equations.

5. Conclusion

In view of the evidence illustrated in the first and second Declarations, claims 1, 15 and 18-20 are not anticipated by the Sasaki references. Moreover, the basis of the Examiner's allegations and dismissal of the evidence in the First and Second Declarations is factually incorrect.

In view of the foregoing, the Sasaki references fail to disclose each and every limitation of independent claims 1-16 and 18-20. Accordingly, reversal of these rejections is required.

B. Claims 1-16 and 18-20 Would Not Have Been Obvious Over Sasaki '370 in View of Sakuma

Sakuma fails to remedy the deficiencies of Sasaki '370 as described above with respect to the rejections under 35 U.S.C. §102(e). Sakuma also fails to teach or suggest resin particles that satisfy the following equations: $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$, where a is a major axis of each particle; b is a minor axis of each particle; and c is a thickness of each particle, as specifically defined in claims 1, 15 and 18-20.

It is described in the present application that particles with the recited dimensions have a shape that "is not a so-called cigar shape or an acicular or tabular form, but a disk-like

shape or an elliptical shape keeping a sphere to some extent, such as a rugby ball shape." See page 12, line 24 to page 13, line 2. The present application also teaches that "such a shape can be generally regulated according to $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$." See page 13, lines 2-4 of the specification.

To the contrary, Sakuma teaches that "since each of the resin particles has a boundary line, the number of particles per unit weight is large in comparison with non-spherical resin particles having no boundary line, for example, hemispherical, rugby ball shaped, wooden-bowl shaped and go stone shaped particles which have been reported" (see paragraph [0117] in Sakuma (emphasis added)). Sakuma thus requires particles with a distinct boundary line, and specifically indicates that the particles therein are shaped differently than the particles disclosed in the present application having a rugby ball shape. Sakuma specifically teaches away from rugby ball shape particles, indicating that such particles lack a sufficient number of particles per unit weight and a boundary line, and thus teaches away from particles having the b/a ratio between 0.5 and 1.0 and the c/b ratio between 0.4 and 0.8 as recited in the present claims.

Contrary to the Patent Office's allegations, Appellants' arguments that Sakuma does not teach an elliptical or "rugby-shaped" particle are not moot because the arguments illustrate that Sakuma not only fails to teach or suggest particle dimensions that satisfy the recited equations (i.e., $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$), but also teaches away from particle dimensions that satisfy the exact same equations as required in claims 1, 15 and 18-20

Therefore, Appellants assert the shape of the particles of Sakuma not only fail to teach or suggest particle dimensions that satisfy the recited equations, but in fact teach away from particle dimensions that satisfy $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$ as required in claims 1, 15 and 18-20. Thus, the combination of Sasaki '370 and Sakuma does not achieve the present

resin powder having particles with dimensions that satisfy the equations (i.e., $0.5 < b/a < 1$ and

$0.4 < c/b < 0.8$) specifically defined in claims 1, 15 and 18-20. As such, the 35 U.S.C. §103(a) rejection maintained by the Examiner is improper and should be reversed.

VIII. CONCLUSION

For all of the reasons discussed above, it is respectfully submitted that the rejections are in error and that claims 1-16 and 18-20 are in condition for allowance. For all of the above reasons, Appellants respectfully request this Honorable Board to reverse the rejections of claims 1-16 and 18-20.

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APPENDIX A - CLAIMS APPENDIX**CLAIMS INVOLVED IN THE APPEAL:**

1. A resin powder for a cosmetic comprising particles containing a resin, wherein the particles have a degree of hydrophobicity of from 10 % to 60 %, wherein the particles have undergone a reshaping treatment, and when seen from a direction in which a projected area of the particle to a plane is maximum, the particles satisfy the following equations:

$$0.5 < b/a < 1$$

$$0.4 < c/b < 0.8$$

where

a is a major axis of each particle;

b is a minor axis of each particle; and

c is a thickness of each particle.

2. The resin powder according to claim 1, wherein the particles have an average value of shape factors SF1 of from 110 to 140 and the shape factor SF1 is defined by

$$SF1 = (ML^2/A) \times (\pi/4) \times 100$$

where ML represents a maximum length of the particles, and A represents a projected area of the particles.

3. The resin powder according to claim 1, wherein the particles have an average value of shape factors SF1 of from 110 to 130 and the shape factor SF1 is defined by

$$SF1 = (ML^2/A) \times (\pi/4) \times 100$$

where ML represents a maximum length of the particles, and A represents a projected area of the resin-containing particles.

4. The resin powder according to claim 1, wherein the particles have an average value of shape factors SF1 of from 110 to 120 and the shape factor SF1 is defined by

$$SF1 = (ML^2/A) \times (\pi/4) \times 100$$

where ML represents a maximum length of the particles, and A represents a projected area of the resin-containing particles.

5. The resin powder according to claim 1, wherein a, b and c are simultaneously satisfactory with the following equations:

$$0.65 < b/a < 0.85$$

$$0.33 < c/b < 0.67$$

6. The resin powder according to claim 1, wherein $2\mu\text{m} < a < 20\mu\text{m}$, $1\mu\text{m} < b < 10\mu\text{m}$, and $0.2\mu\text{m} < c < 8\mu\text{m}$.

7. The resin powder according to claim 1, wherein the particles have an average volume particle size of from 2 μm to 20 μm .

8. The resin powder according to claim 1, wherein the resin has a glass transition temperature T_g of from 10 to 100 $^{\circ}\text{C}$.

9. The resin powder according to claim 1, wherein the resin has a glass transition temperature T_g of from 30 to 80 $^{\circ}\text{C}$.

10. The resin powder according to claim 1, wherein the resin powder has a surfaceness index not larger than 2.0 and the surfaceness index is defined by

(Surfaceness index) = (specific surface area measured)/(specific surface area calculated)

$$(\text{Specific surface area calculated}) = 6\Sigma(n \times R^2)/\{\rho \times \Sigma(n \times R^3)\}$$

where n represents number of particles within a channel of a particle size distribution measurement device; R represents a diameter of the channel of the particle size distribution measurement device; and ρ represents a density of the agglomerate of the resin-containing particles.

11. The resin powder according to claim 1, wherein the resin is a polymer of a monomer selected from a group consisting of styrene, derivatives of styrene, acrylic acid

esters, methacrylic acid esters, ethylenically unsaturated acid monomers, vinyl nitriles, vinyl ethers, vinyl ketones, and olefins.

12. The resin powder according to claim 1, wherein the resin is a styrene-acrylate copolymer.

13. The resin powder according to claim 1, wherein the resin has a number average molecular weight M_n of from 5,000 to 20,000.

14. The resin powder according to claim 1, wherein fine particles are adhered onto the surfaces of the particles.

15. A process for preparing a resin powder for cosmetic including particles containing a resin, comprising a step of producing the particles by emulsion polymerization, a step of subjecting the particles to a reshaping treatment and a step of flattening the particles by colliding the particles against a uniform plane under high pressure, wherein the particles have a degree of hydrophobicity of from 10 % to 60 %, and when seen from a direction in which a projected area of the particle to a plane is maximum, the particles are satisfactory with the following equations:

$$0.5 < b/a < 1$$

$$0.4 < c/b < 0.8$$

where

a is a major axis of each particle;

b is a minor axis of each particle; and

c is a thickness of each particle.

16. The process according to claim 15, further comprising a step of flattening the particles by mixing and stirring the particles and a medium.

18. A powdered cosmetic comprising an oil component and a resin powder including particles containing a resin, wherein the particles have a degree of hydrophobicity

of from 10 % to 60 %, wherein the particles have undergone a reshaping treatment, and when seen from a direction in which a projected area of the particle to a plane is maximum, the particles satisfy the following equations:

$$0.5 < b/a < 1$$

$$0.4 < c/b < 0.8$$

where

a is a major axis of each particle;

b is a minor axis of each particle; and

c is a thickness of each particle.

19. An emulsified cosmetic comprising an oil component and a resin powder including particles containing a resin, wherein the particles have a degree of hydrophobicity of from 10 % to 60 %, wherein the particles have undergone a reshaping treatment, and when seen from a direction in which a projected area of the particle to a plane is maximum, the particles satisfy the following equations:

$$0.5 < b/a < 1$$

$$0.4 < c/b < 0.8$$

where

a is a major axis of each particle;

b is a minor axis of each particle; and

c is a thickness of each particle.

20. An antiperspirant cosmetic comprising an oil component and a resin powder including particles containing a resin, wherein the particles have a degree of hydrophobicity of from 10 % to 60 %, wherein the particles have undergone a reshaping treatment, and when seen from a direction in which a projected area of the particle to a plane is maximum, the particles satisfy the following equations:

$$0.5 < b/a < 1$$

$$0.4 < c/b < 0.8$$

where

a is a major axis of each particle;

b is a minor axis of each particle; and

c is a thickness of each particle.

APPENDIX B - EVIDENCE APPENDIX

- (1) Rule 1.132 Declaration filed December 15, 2006
- (2) Rule 1.132 Declaration filed July 5, 2007

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Yuki SASAKI et al.

Group Art Unit: 1618

Application No.: 10/731,031

Examiner: J. ROGERS

Filed: December 10, 2003

Docket No.: 118048

For: RESIN POWDER FOR COSMETIC AND COSMETIC USING THE SAME

DECLARATION UNDER 37 C.F.R. §1.132

I, Yuki Sasaki, a citizen of Japan, hereby declare and state:

1. I have a bachelor of science degree in chemistry which was conferred upon me by Hiroshima University, Faculty of Science, Department of Chemistry, in Higashi-Hiroshima, Japan in 1994.
2. I have been employed by Fuji Xerox Co., Ltd. since April 1994, and I have had a total of five years of work and research experience in research and development of resin powder.
3. I am a named inventor in the above-captioned patent application. I am familiar with the patent application.
4. I have a professional relationship with the Assignee, Fuji Xerox Co., Ltd., of the above-identified patent application. In the course of that professional relationship, I received compensation directly from Fuji Xerox Co., Ltd. for my work relating to research and development of resin powder.
5. I and/or those under my direct supervision and control have conducted the following tests: Comparative Experiment; Evaluation 1; and Evaluation 2.

The experiment and evaluations were conducted to obtain results and evidence illustrating and supporting the patentability of the claimed subject matter of the present application. More specifically, the Comparative Experiment illustrates that resin powders manufactured according to the teachings of references cited by the Patent Office fail to satisfy the claimed limitations with respect to projected particle dimensions for the resin powders. Evaluations 1 and 2 provide results illustrating that panelists experienced unexpected results from skin applications of the claimed resin powder.

Comparative Experiment

Comparative resin powders A, B, and C were prepared in accordance with Example 1 described in U.S. Patent Application Publication No. 2003/0044370 to Sasaki et al. (hereinafter "Sasaki '370"), Manufacture Example 1 described in U.S. Patent No. 6,893,649 to Sasaki et al. (hereinafter "Sasaki '649"), and Example 1 described in U.S. Patent No. 7,005,480 to Kinsho et al., respectively. The comparative resin powders A and B were prepared in the same manner as Preparation Example 1 described in the present application, except that a reshaping treatment was not conducted in preparing these comparative powders. The reshaping treatment was also not conducted in preparation of the comparative resin powder C.

The particle property data of the comparative resin powders A, B, and C were obtained and measured in the same manner as particle property data for the Preparation Example 1 in the present application. The results of the particle property data for the comparative resin powders A, B, and C are set forth below in Table 1.

Table 1

	Resin Powder A	Resin Powder B	Resin Powder C
Degree of hydrophobicity	30	30	No data
Methanol concentration 1 (%)	20	20	No data
Methanol concentration 2 (%)	40	40	No data
Shape factor SFI	112	115	102
b/a	1.0	1.0	1.0
c/b	1.0	1.0	1.0
Average volume particle size (μm)	6.5	6.4	120
Tg ($^{\circ}\text{C}$)	68	68	No data
Surfaceness index	1.35	1.36	No data

wherein a is a major axis of each particle;
b is a minor axis of each particle; and
c is a thickness of each particle.

As shown in Table 1, the comparative resin powders A, B, and C of Sasaki '370, Sasaki '649 and Kinsho et al., respectively, do not satisfy the requirements of the claimed projected particle dimension limitations, namely the requirements that $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$.

Evaluation 1

Solid powder foundations of Comparative Examples A, B, and C were prepared in the same manner described in Example 1 of the present application, except that resin powders A, B, and C, respectively, were used in place of the resin powder of Preparation Example 1.

Example 1, Example 2 and Comparative Example 1 are as described in the present application. That is, Example 1 is a solid powder foundation of the resin powder of Preparation Example 1 obtained by the claimed method including a reshaping treatment. Example 2 is a solid powder foundation of a resin powder of Preparation Example 2 obtained by the claimed method including a reshaping treatment. Comparative Example 1 is a solid

powder foundation of a resin powder of Preparation Example 3 obtained by a method excluding a reshaping treatment, similar to resin powders taught in Sasaki '370 and Sasaki '649.

The solid foundations of the Comparative Examples A, B, and C, the Examples 1 and 2, and the Comparative Example 1 were applied to the skin of twenty (20) panelists, including both males and females. A hiding power of the solid foundation with respect to skin contour and dullness or blemish of the skin were evaluated by the panelists according to criteria as follows: Very good (5); Good (4); Moderate (3); Bad (2); and Very bad (1).

The results of Evaluation 1 are set forth in Table 2. The numerical values in Table 2 are an average value of the evaluations by the 20 panelists.

Table 2

	Example 1	Example 2	Comparative Example 1	Comparative Example A	Comparative Example B	Comparative Example C
Resin Powder	Preparation Example 1	Preparation Example 2	Preparation Example 3	Resin Powder A	Resin Powder B	Resin Powder C
Hiding power	4.8	4.6	2.6	2.7	2.7	1.2

Evaluation 2

Face paints of Comparative Examples D, E, and F were prepared in the same manner described in Example 5 of the present application, except that resin powders A, B, and C, respectively, were used in place of the resin powder of Preparation Example 1.

Example 5, Example 6 and Comparative Example 11 are as described in the present application. That is, Example 5 is a solid powder foundation of the resin powder of Preparation Example 1 obtained by the claimed method including the reshaping treatment. Example 6 is a solid powder foundation of a resin powder Preparation Example 2 obtained by the claimed method including the reshaping treatment. Comparative Example 11 is a solid

powder foundation of a resin powder of Preparation Example 3 obtained by a method excluding a reshaping treatment.

The face paints of the Comparative Examples D, E, and F, the Examples 5 and 6, and the Comparative Example 11 were also applied to the skin of each of the panelists. A hiding power of the face paints with respect to skin contour and dullness or blemish of the skin were evaluated by the panelists according to the above-identified criteria.

The results of Evaluation 2 are set forth in Table 3. The numerical values in Table 3 are an average value of the evaluation by each of the 20 panelists.

Table 3

	Example 5	Example 6	Comparative Example 11	Comparative Example D	Comparative Example E	Comparative Example F
Resin Powder	Preparation Example 1	Preparation Example 2	Preparation Example 3	Resin Powder A	Resin Powder B	Resin Powder C
Hiding power	4.3	4.0	2.0	2.1	2.0	1.0

In Tables 2 and 3, the results of Evaluations 1 and 2, respectively, illustrate that a cosmetic using powder subjected to a reshaping treatment has an unexpected superior result regarding hiding skin contour. By subjecting resin particles to a physical reshaping treatment, the particles are not uniform and have a variation in shape. Particles having this variation in shape are believed to diffuse light on the skin in various directions so as to hide skin contour and dullness or blemish of the skin.

6. I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and/or imprisonment under Section 1001 of Title 18

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Application No. 10/731,031

of the United States Code, and that such willful false statements may jeopardize the validity
of the application or any patent issuing therefrom.

Date: 2006/12/13Yuki Sasaki
Yuki Sasaki

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Yuki SASAKI et al

Group Art Unit: 1618

Application No.: 10/731,031

Examiner: J. ROGERS

Filed: December 10, 2003

Docket No.: 118048

For: RESIN POWDER FOR COSMETIC AND COSMETIC USING THE SAME

DECLARATION UNDER 37 C.F.R. §1.132

I, Yuki Sasaki, a citizen of Japan, hereby declare and state:

1. I have a bachelor of science degree in chemistry which was conferred upon me by Hiroshima University, Faculty of Science, Department of Chemistry, in Higashi-Hiroshima, Japan in 1994.
2. I have been employed by Fuji Xerox Co., Ltd. since April 1994, and I have had a total of five years of work and research experience in research and development of resin powder.
3. I am a named inventor in the above-captioned patent application. I am familiar with the patent application.
4. I have a professional relationship with the Assignee, Fuji Xerox Co., Ltd., of the above-identified patent application. In the course of that professional relationship, I received compensation directly from Fuji Xerox Co., Ltd. for my work relating to research and development of resin powder.
5. I and/or those under my direct supervision and control have conducted the following tests.

The experiments were conducted to obtain results and evidence illustrating and supporting the patentability of the claimed subject matter of the present application. More specifically, the Comparative Experiments 1 and 2 illustrate that resin powders manufactured according to the teachings of references cited by the Patent Office fail to satisfy the claimed limitations with respect to projected particle dimensions for the resin powders.

Comparative Experiment 1

First comparative resin powders 1-7 (hereinafter "first comparative examples 1-7") were prepared in accordance with Example 1 described in U.S. Patent Application Publication No. 2003/0044370 to Sasaki et al. (hereinafter "Sasaki '370"). First comparative examples 1-7 are in accordance with Examples 1-7 of Sasaki '370 as summarized in Table 2 therein.

The particle dimension data of first comparative examples 1-7 were obtained and measured in the same manner as particle property data for the Preparation Example 1 in the present application. The results of the particle property data for first comparative examples 1-7 are set forth below in Table 1.

Table 1

	Shape factor SF1	b/a	c/b
Comp Ex. 1	112	1.0	1.0
Comp Ex. 2	112	0.9	1.0
Comp Ex. 3	113	1.0	1.0
Comp Ex. 4	110	1.0	1.0
Comp Ex. 5	113	1.0	1.0
Comp Ex. 6	112	1.0	1.0
Comp Ex. 7	113	1.0	1.0

wherein a is a major axis of each particle;
b is a minor axis of each particle; and
c is a thickness of each particle.

As shown in Table 1, first comparative examples 1-7 of Sasaki '70 do not satisfy the requirements of the claimed projected particle dimension limitations, namely the requirements that $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$.

Comparative Experiment 2

Second comparative resin powders 1-8 (hereinafter "second comparative examples 1-8") are in accordance with Manufacture Examples 1-8 described in U.S. Patent No. 6,893,649 to Sasaki et al. (hereinafter "Sasaki '649").

The particle dimension data of second comparative examples 1-8 were obtained and measured in the same manner as particle property data for the Preparation Example 1 in the present application. The results of the particle property data for second comparative examples 1-8 are set forth below in Table 2.

Table 2

	Shape factor SF1	b/a	c/b
Comp Ex. 1	117	1.0	1.0
Comp Ex. 2	126	1.0	1.0
Comp Ex. 3	130	1.0	0.9
Comp Ex. 4	112	1.0	1.0
Comp Ex. 5	142	0.9	1.1
Comp Ex. 6	141	0.8	0.9
Comp Ex. 7	125	1.0	0.9
Comp Ex. 8	143	0.8	1.0

wherein a is a major axis of each particle;
b is a minor axis of each particle; and
c is a thickness of each particle.

As shown in Table 2, second comparative examples 1-8 of Sasaki '649 do not satisfy the requirements of the claimed projected particle dimension limitations, namely the requirements that $0.5 < b/a < 1$ and $0.4 < c/b < 0.8$.

6. I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and

further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and/or imprisonment under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing therefrom.

Date: 07/03/07

Yuki Sasaki
Yuki Sasaki

APPENDIX C - RELATED PROCEEDINGS APPENDIX

NONE